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May 30, 2002

WRITER'S DIRECT NUMBER:
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Commissioner for Patents
Washington, D.C. 20231

Re: U.S. Utility Patent Application
Appl. No. 10/005,647; Filed: December 7, 2001
For: **Glucuronyl C5-Epimerase, DNA Encoding
the Same and Uses Thereof**
Inventors: Jalkanen *et al.*
Our Ref: 1708.0280002/MAC/MBT

Sir:

Transmitted herewith for appropriate action are the following documents:

1. Information Disclosure Statement;
2. A listing of the cited documents on Form PTO-1449;
3. Copies of the cited documents (AL1-AS6); and
4. One (1) return postcard.

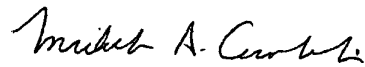
It is respectfully requested that the attached postcard be stamped with the date of filing of these documents, and that it be returned to our courier. In the event that extensions of time are necessary to prevent abandonment of this patent application, then such extensions of time are hereby petitioned.

Commissioner for Patents
May 30, 2002
Page 2

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



Michele A. Cimbala
Attorney for Applicants
Registration No. 33,851

MAC:MBT:dcw
Enclosures

SKGF_DC1:17335.1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



In re application of:

Jalkanen *et al.*

Appl. No. 10/005,647

Filed: December 7, 2001

For: **Glucuronyl C5-Epimerase, DNA
Encoding the Same and Uses
Thereof**

Confirmation No. 9088

Art Unit: 1645

Examiner: *To be assigned*

Atty. Docket: 1708.0280002

Information Disclosure Statement

Commissioner for Patents
Washington, D.C. 20231

Sir:

Listed on accompanying Form PTO-1449 are documents that may be considered material to the examination of this application, in compliance with the duty of disclosure requirements of 37 C.F.R. §§ 1.56, 1.97 and 1.98. A copy of each of these documents is provided.

Where the publication date of a listed document does not provide a month of publication, the year of publication of the listed document is sufficiently earlier than the effective U.S. filing date and any foreign priority date so that the month of publication is not in issue. Applicants have listed publication dates on the attached PTO-1449 based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was actually published on the date indicated.

Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

This statement should not be construed as a representation that a search has been made, or that information more material to the examination of the present patent application does not exist. The Examiner is specifically requested not to rely solely on the material submitted herewith. It is further understood that the Examiner will consider information that had been cited or submitted to the U.S. Patent and Trademark Office in a prior application relied on under 35 U.S.C. § 120. 1138 OG 37, 38 (May 19, 1992).


It is respectfully requested that the Examiner initial and return a copy of the enclosed PTO-1449, and to indicate in the official file wrapper of this patent application that the documents have been considered.

This Information Disclosure Statement is being filed before the mailing date of a first Office Action on the merits. No statement or fee is required.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



Michele A. Cimbala
Attorney for Applicants
Registration No. 33,851

Date: May 30, 2002

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FORM PTO-1449 INFORMATION DISCLOSURE STATEMENT	ATTY. DOCKET NO. 1708.0280002	APPLICATION NO. 10/005,647
	APPLICANT Jalkanen et al.	
	FILING DATE December 7, 2001	GROUP 1645

U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE
	AA						
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FOREIGN PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION
	AL1	WO 96/14425	05/17/1996	WIPO			Yes No
	AM1	WO 98/48006	10/29/1998	WIPO			Yes No
	AN						Yes No
	AO						Yes No
	AP						Yes No

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)			
	AR	<u>1</u>	Campbell, P. et al., "Biosynthesis of Heparin/Heparan Sulfate: Purification of the D-Glucuronyl C-5 Epimerase from Bovine Liver," <i>J. Biol. Chem.</i> 269:26953-26958, The American Society of Biochemistry and Molecular Biology Inc. (1994).
	AS	<u>1</u>	Casu, B. et al., "Conformational flexibility: a new concept for explaining binding and biological properties of iduronic acid-containing glycosaminoglycans," <i>Trends Biochem. Sci.</i> 13:221-225, Elsevier Science Ltd. (1988).
	AT	<u>1</u>	Kelley, L.A. et al., "Enhanced Genome Annotation Using Structural Profiles in the Program 3D-PSSM," <i>J. Mol. Biol.</i> 299:499-520, Academic Press (June 2000).

EXAMINER	DATE CONSIDERED
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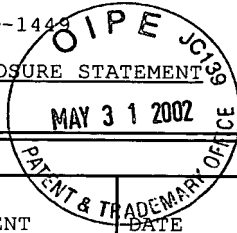
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FORM PTO-1449
INFORMATION DISCLOSURE STATEMENT



ATTY. DOCKET NO.
1708.0280002

APPLICATION NO.
10/005,647

APPLICANT
Jalkanen et al.

FILING DATE
December 7, 2001

GROUP
1645

U.S. PATENT DOCUMENTS

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FOREIGN PATENT DOCUMENTS

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	AM					Yes No
	AN					Yes No
	AO					Yes No
	AP					Yes No

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

AR	2	Kjellén, L. and Lindahl, U., "Proteoglycans: Structures and Interactions," <i>Annu. Rev. Biochem.</i> 60:443-475, Annual Reviews Inc. (1991).
AS	2	Li, J.-p. et al., "Biosynthesis of Heparin/Heparan Sulfate. cDNA Cloning and Expression of D-Glucuronyl C5-Epimerase from Bovine Lung," <i>J. Biol. Chem.</i> 272:28158-28163, The American Society for Biochemistry and Molecular Biology, Inc. (1997).
AT	2	Malmström, A. et al., "Biosynthesis of Heparin. Partial Purification of the Uronosyl C-5 Epimerase," <i>J. Biol. Chem.</i> 255:3878-3883, American Society of Biochemistry and Molecular Biology Inc. (1980).

EXAMINER

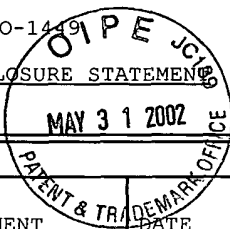
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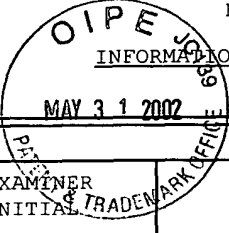
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	AM					Yes No
	AN					Yes No
	AO					Yes No
	AP					Yes No

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

AR	3	Ron, D. et al., "Expression of Biologically Active Recombinant Keratinocyte Growth Factor. Structure/Function Analysis of Amino-Terminal Truncation Mutants," <i>J. Biol. Chem.</i> 268:2984-2988, American Society of Biochemistry Molecular Biology Inc. (1993).
AS	3	Salmivirta, M. et al., "Heparan sulfate: a piece of information," <i>FASEB J.</i> 10:1270-1279, Federation of American Societies for Experimental Biology (1996).
AT	3	Wilson, R. et al., "2.2 Mb of contiguous nucleotide sequence from chromosome III of <i>C. elegans</i> ," <i>Nature</i> 368:32-38, Macmillan Magazines Limited (1994).

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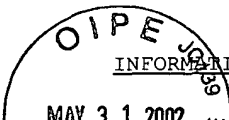
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OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

AR	4	Voet, D. and Voet, J.G., "Biochemistry," 2 nd Edition, John Wiley and Sons, Inc., New York, NY, p.965-967 (1995).
AS	4	Xue, F. and Cooley, L., "kelch Encodes a Component of Intercellular Bridges in Drosophila Egg Chambers," Cell 72:681-693, Cell Press (1993).
AT	4	NCBI Entrez, GenBank Report, Accession No. L08483, from Xue, F. et al. (1993).

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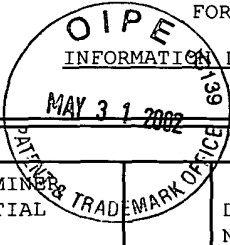
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	AP					Yes No

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AR	<u>5</u>	NCBI Entrez, GenBank Report, Accession No. P46555, from Sulston, J. (1994).
AS	<u>5</u>	NCBI Entrez, GenBank Report, Accession No. AF043700, from Wilson, R. et al. (1998).
AT	<u>5</u>	NCBI Entrez, GenBank Report, Accession No. AAF36018, from The C. elegans Sequencing Consortium et al. (1998).

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	AN					Yes No	
	AO					Yes No	
	AP					Yes No	

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)			
AR	6	NCBI Entrez, GenBank Report, Accession No. AAF57373, from Adams, M.D. et al. (March 2000).	
AS	6	Féthière, J. et al., "Crystal Structure of Chondroitin AC Lyase, a Representative of a family of Glycosaminoglycan Degrading Enzymes," <i>J. Mol. Biol.</i> 288:635-647, Academic Press (May 1999).	
AT			

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